What is claimed is:

1.   In a data storage environment having a server, a first and second data storage volume, and production data being stored on the first data storage volume, and a copy of

5   the data denominated as the data copy being stored on the second data storage volume, a method of handling updates to the data copy when the environment is configured for processing incremental updates to the data copy the method comprising the steps of:

(a) responsive to the start of a full non-incremental update to the copy of the data, not marking the state of the production data as being ready for being copied;

10   (b) updating a session associated with the data copy as being in an inconsistent state with the data copy; and

(c) completing the update to the copy of data.

2.   The method of claim 1, wherein a step of preparing to update the data copy by

15   protecting the data copy from being written over until the update to the copy of data is performed before the step of completing the full copy.

3.   The method of claim 1, wherein the session is associated with a tracking data structure.

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4.   The method of claim 2, wherein the session is associated with a tracking data structure and a transfer data structure is associated with the step of preparing to transfer data.

5   5.   The method of claim 1, wherein the environment includes a first and second data storage system and the first and second data storage volumes are each on different data storage systems from each other.

6.   The method of claim 2, wherein the session is associated with a tracking data

10   structure.

7.   The method of claim 6, wherein the session is associated with a tracking data structure and a transfer data structure is associated with the step of preparing to transfer data.

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8.   The method of claim 7, wherein the environment includes a first and second data storage system and the first and second data storage volumes are each on different data storage systems from each other.

20   9.   A system for handling updates to the data copy when the environment is configured for processing incremental updates to the data copy, the system comprising:

a first data storage volume having production data stored on it;

a second data storage volume in communication with the first data storage system, and

having a copy of the production data denominated as the data copy on the first data

volume;

a server in communication with the first data volume;

5   computer-executable program logic configured in relationship to the first and second data

storage volume and the server for causing the following computer-executed steps to

occur:

(a) responsive to the start of a full non-incremental update to the copy of the data, not

marking the state of the production data as being ready for being copied;

10   (b) updating a session associated with the data copy as being in an inconsistent state with

the data copy; and

(c) completing the update to the copy of data.

15   10.   The system of claim 9, wherein a step of preparing to update the data copy by

protecting the data copy from being written over until the update to the copy of data is

performed before the step of completing the full copy.

11.   The system of claim 9, wherein the session is associated with a tracking data

20   structure.

12. The system of claim 10, wherein the session is associated with a tracking data structure and a transfer data structure is associated with the step of preparing to transfer data.

5   13. The system of claim 9, wherein the environment includes a first and second data storage system and the first and second data storage volumes are each on different data storage systems from each other.

14. The system of claim 10, wherein the session is associated with a tracking data

10 structure.

15. The system of claim 14, wherein the session is associated with a tracking data structure and a transfer data structure is associated with the step of preparing to transfer data.

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16. The system of claim 15, wherein the environment includes a first and second data storage system and the first and second data storage volumes are each on different data storage systems from each other.

20 17. A program product for use in a data storage environment and being for handling periodic updates to a copy of production data, wherein the data storage environment includes:

a first data storage volume having production data stored on it;

a second data storage volume in communication with the first data storage system, and having a copy of the production data denominated as the data copy on the first data volume;

5   a server in communication with the first data volume; and

the program product includes computer-executable logic contained on a computer-readable medium and which is configured for causing the following computer-executed step to occur:

(a) responsive to the start of a periodic update to the copy of the data, marking the

10   state of the production data as being ready for being incrementally copied to update the data copy to account for any incremental changes to the production data since either a full copy or a prior incremental copy of the production data was performed;

(b) preparing to update the data copy by protecting the production data from being written over until an incremental copy operation is performed;

15   (c) updating the data copy in accordance with the incremental copy operation being performed; and

(d) marking the state of the production data as having been transferred, and unprotecting the production data thereby allowing it to be written over.

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